

Section 5. *Range of butterflies.* An interesting brief discussion of the range limits of species and of what determines these limits. Food plant sometimes is the determining factor, sometimes obviously not; something not obvious in many cases, but real.

Section 12. *Seasonal forms.* In some cases the early spring appearers are darker in markings than the later ones; in other cases, as *Colias eurytheme*, the early or cold weather forms are paler than the later warm weather forms.

Section 13. *Hybrids.* Some interesting examples of butterfly hybridization are noted. Author has seen *Thecla dumetorum* and *Th. iroides* in copulo; also *Pieris rapae* plus *P. protodice*. Author noted both of these cases in seven years; in the same time he noted perhaps twenty other pairs of butterflies in regular mating; he concludes, therefore, that one pair of butterflies in every one hundred and forty is regularly mismated, that is seven out of one thousand. "Now if that per cent be normal and continues, we see at once that there can be no resulting fertile progeny from the mismating, for if there were intergraded varieties following every mismating the world would be full of hit-and-miss butterflies in a few years. It therefore appears conclusive that, as in other lines of the animal kingdom, the mismatings must be infertile immediately or in the next generation." [This is in opposition to Luther Burbank's belief that much of the variety in organisms, plants, at least, is due to fertile hybridizing. V. L. K.]

Section 14. *Dimorphism.* An interesting paragraph calling attention to white and black dichromatism of *Argynnis* and *Colias*. Author notes that the normal female of *Colias* is being replaced by the albino, and believes that the normal females of *Argynnis nokomis*, *A. nitoeris*, and *A. leto* have all been supplanted by the black form. [This is in line with Emery's theory of the origin of secondary sexual forms — V. L. K.]

Section 16. An interesting paragraph on gynandromorphy. Author notes the capture of a specimen of *Lycena piasus* with male and female right and left wings (figured).

Section 17. *Sex-marks.* Notes an interesting secondary sexual character namely, in *Nymphalidae* the fore-legs or lappets of males "are fully clad with plenty of long hairs, while the lappets of the females are less fully clad in shorter and scanty hairs.

Section 20. *Non-feeding species.* Notes the non-feeding characteristic of the *Satyridae*; yet they have sucking proboscis.

Section 24. *Taming butterflies.* "Butterflies are easily tamed . . . ; a day or two will suffice to tame a butterfly so that when it sees you coming it will walk toward